

ZAK, Czeslaw

Water balance of the Kielce Voivodeship. Kwartalnik geol  
6 no.4:809-811 '62.

1. Świętokrzyska Stacja Terenowa, Instytut Geologiczny,  
Warszawa.

ZAK, Czeslaw

Tectonic profile of the Gory Pieprzowe Mountains. Ewangelik  
geol 5 no.4:1002 '61.

1. Swietokrzyska Stacja Terenowa, Instytut Geologiczny, Warszawa.

ZAK, Czeslaw

Geological research and the economic development of the Gory  
Swietokrzyskie Mountains region. Przegl geol 10 no.8:388-392 Ag  
'62.

1. Swietokrzyska Stacja Terenowa, Instytut Geologiczny, Warszawa.

Zak, Cecylia

Adsorption of staphylococcal bacteriophages on bacteriological filters.  
Med. dosw. mikrob. 11 no. 1:39-42 1959.

1. Z Zakladu Bakteriologii Państwowego Zakladu Higieny w Warszawie.  
(MICROCOCCUS PYOGENES,  
bacteriophage, filter adsorption (Pol))  
(BACTERIOPHAGE,  
of Micrococcus pyogenes, filter adsorption (Pol))

ZAK, CZEŚLAW

POLAND / Chemical Technology. Chemical Products and H  
Their Application. Ceramics. Glass. Binding  
Materials. Concretes.

Abs Jour: Ref Zhur-Khimiya, No 19, 1958, 65199

Author : Zak Czeslaw

Inst :

Title : The Kelets Area as a Raw-Material Base for the  
Production of Binding Materials

Orig Pub: Cement. Wapno. Gips, 1958, 14, No 2, 30-33

Abstract: Described are the rich deposits, located in the  
Kelets area, of high-quality limestones and gyps-  
eous stone, which are the raw material for the  
production of cement, lime and gypsum.

Card 1/1

ZAK, D.L.

PAGE 1 BOOK EXTRAS

307/419

Handbook on Noncombustible Materials, Vol. 1: Nonmetallic Materials

Handbook on Noncombustible Building Materials, Vol. 2: Metallic Materials

Handbook, Number 1, 3000-723-B, Internally Secured, 60,000 copies printed.

MA: G.C. Pogosian-Kluyev, Doctor of Technical Sciences; Professor; Dr. of Sci.  
Vasil A.S. Landa, Doctor of Technical Sciences; Professor; Dr. of Philology;  
Kornei V.I. Slobodin, Engineer; Tech. Edn. Dr. V. Kostrom; Headline Dr.; for  
Information Literature (Budapest); Dr. M. Nagyvary, Researcher.

PURPOSE: This book is intended for machine-building and construction engineers,  
architects, and other persons interested in the properties of various materials.

CONTENTS: This is the fourth of a twelve Handbook on Machine-Building Materials.  
Volume 1 discusses noncombustible materials suitable for use in machine building and  
in other noncombustible applications. Textile, wood, plastic, concrete, paper,  
and glass materials and instances of their materials are reviewed and data on  
their physical and mechanical properties are listed. No permeability and  
chemical resistance follow material chapters.

Annotations

## Handbook on Machine-Building Materials (Cont.)

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## Handbook on Machine-Building Materials (Cont.)

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Card 11/15

AFANAS'YEV, A.N., kand.tekhn.nauk; BASOV, N.I., kand.tekhn.nauk; BELOVITSKIY, A.A., inzh.; VESELOVSEIY, V.S., doktor tekhn.nauk, prof.; GORELIK, B.I., kand.tekhn.nauk; DOROKHNEV, I.M., inzh.; ZAK, D.L., inzh.; IVONIN, V.I., inzh. [deceased]; ELINOV, I.Ya., doktor tekhn.nauk, prof.; LEVIN, A.N., doktor tekhn.nauk, prof.; LEVIN, S.N., kand.tekhn.nauk; LEPETOV, V.A., kand.tekhn.nauk; LEONT'YEV, N.L., doktor tekhn.nauk, prof.; LOKHINA, P.I., kand.tekhn.nauk; MATVEIEVA, L.V., inzh.; MIKHAYLOV, A.N., doktor tekhn.nauk, prof.; MUDRIK, Eh.I., kand.tekhn.nauk; PERLIN, S.M., inzh.; SALAZKIN, K.A., kand.tekhn.nauk; SIL'VESTROVICH, S.I., kand.tekhn.nauk; SOKOLOVSKAYA, S.I., kand.tekhn.nauk; KHENKIN, A.A., inzh.; KHUKHRYANSEKIY, P.N., doktor tekhn.nauk, prof.; SHEDDEMAH, I.Yu., kand.tekhn.nauk; TASHUNSKAYA, F.I., kand.tekhn.nauk; POGODIN-ALEKSEYEV, G.I., doktor tekhn.nauk, prof., red.; RYBAKOVA, V.I., inzh., red.izd-va; SOKOLOVA, T.F., tekhn.red.

[Handbook on materials used in the manufacture of machinery] Spravochnik po mashinostroitel'nym materialam; v chetyrekh tomakh. Pod red. G.I. Pogodina-Alekseeva. Moskva, Gos.snauchno-tekhn.izd-vo mashinostroit.lit-ry. Vol. 4. [Nonmetallic materials] Nemetallicheskie materialy. Red.toma A.N. Levin. 1960. 723 p.

(MIRA 13:7)

(Machinery industry) (Nonmetallic materials)

AUTHOR:

Zak, D. L.

SOV/138 -58-4-1/13

TITLE:

Friction Products Made of Asbestos. (Friktsionnyye  
asbestovyye izdeliya).

PERIODICAL:

Kauchuk i Rezina, 1958, Nr.4. pp. 1 - 3. (USSR).

ABSTRACT:

Friction products, made of asbestos, are used in various branches of industry, e.g. in the manufacture of brake cover plates, brake shoes, brake bands and couplings which are used in the coupling mechanism of cars, tractors, combines, aeroplanes, drillers etc. In 1957, 90.8% of all brake cover plates were moulded and rolled. Brake items manufactured from lower grade asbestos amounted to 36.3% of all manufactured brake bands. The Tambovsk Rubber - Asbestos Factory, and the Yaroslavl' Factory for Asbestos Articles have introduced a method for the simultaneous manufacture of adhesives and pastes which shortens the time of preparation considerably. A vacuum mixer which makes it possible to manufacture simultaneously adhesives and pastes, and also to dry them to the required petrol content, was made during 1957. Earlier investigations were carried out by the Central Research Laboratory for Asbestos Goods (TSNILAS) of the Ministry for Chemical Industry

Card 1/3

## Friction Products Made of Asbestos.

SOV/1391-58-4-1/13

(Tsentral'naya nauchno-issledovatel'skaya laboratoriya asbestovykh izdeliy (TSNILAS) ministerstva khimicheskoy promyshlennosti) on the manufacture of asbestos plastic pastes in covered mixers by the dry method, but did not give satisfactory results. At present, many organizations in the USSR and abroad are endeavouring to substitute the gluing of asbestos friction products to the metallic discs by fixing them with special adhesives. The TSNILAS, together with the Gor'kiy Car Factory (Gor'kovskiy avtomobil'nyy zavod) are further investigating these methods. The TSNILAS and the Central Research Institute of Railway Transport (Tsentral'nyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta) manufacture new non-metallic brake shoes consisting of asbestos fibre, a rubber binder and thermostable fillers. These new brake shoes will be tested extensively during 1958. Results of work carried out on the manufacture of asbestos fibres by the "wet" method show that these textile asbestos goods have the characteristics required by GOST and TU standards, and that their quality is equal to those made of ordinary asbestos fibres. Further research work of the TSNILAS, which

Card 2/3

Friction Products Made of Asbestos.

SOV/138 -58-4-1/13

will be carried out in conjunction with the Friction Laboratories of the Institute of Engineering of the Soviet Academy of Sciences (Laboratoriya treniya instituta mashinovedeniya Akademii nauk SSSR), concerns a new thermostable friction material "Retinaks". The Leningrad Asbestos Factory (Leningradskiy asbestovyy zavod) is working on the development of a new friction material "Frivanit" which does not require press forms. A 2.5-to-three-fold increased output (compared with 1956) of these asbestos goods is envisaged for 1958.

Card 3/3

1. Asbestos materials--Production      2. Asbestos materials--  
Applications

ZAK, D.L.

Development of the asbestos products industry between the  
20th and 22d Congresses of the CPSU. Kauch. i rez. 20  
no.9:5-7 S '61. (MIRA 15:2)

1. Gosudarstvennyy komitet Soveta Ministrov SSSR po khimii.  
(Asbestos)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963510003-3

KADZHAYA, D.I., kand.tekhn.nauk; ZAK, D.YA., Inzh.

Efficient designs of reinforced concrete retaining walls.  
Bet. i zhel.-bet. no. 9:400-403 S'60. (MIBA 13:9)  
(Retaining walls)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963510003-3"

SLADKI, Edward; GROTT-SWIEZAWSKA, Eva; ZAK, Edward

On possible azulene therapy of chronic inflammations of the large intestine. Polski tygod.lek. 15 no.21:784-787 23 Ky '60.

1. Z I Kliniki Chorob Wewnetrznych A.M. w Lodz; kierownik: prof.  
dr nauk med. J.W.Grott.  
(CYCLOPARAFFINS ther)  
(COLITIS ther)

XOZAR, Zbigniew; SLADKI, Edward; ZAK, Edward

Clinical aspects of chronic trichinellosis in people. II.  
Studies in patients with chronic diseases of the motoric  
system. Wiad. parazytol. 10 no.6:665-671 '64

1. Laboratory of Antropozoonoses of the Department of Para-  
sitology, Polish Academy of Sciences, and Department of  
Parasitology, Veterinary Faculty, Wrocław, Poland.

SWIĘZAWSKA, Iwa; ZAK, Edward

Rzec. cases of goit. Pol. arch. med. wewnet. 36 no. 41/81-458  
'62.

1. 2 i Kliniki Chorób Wewnętrznych Akademii Medycznej w Łodzi  
(Kierownika prof. dr. n. med. J. J. Grott).

ZAK, E.G.; BESKOV, S.D.

Investigating the phosphates of certain organic bases for use  
as corrosion inhibitors. Uch. zap. MGPI no.146:25-40 '60.  
(Phosphate coating) (Organic compounds)  
(Corrosion and anticorrosives)

(MIRA 15:4)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963510003-3

ZAK, E.G.; BESKOV, S.D.

Use of urea as inhibitor of atmospheric corrosion. Uch. zap.  
MGPI no.146:154-158 '60. (MIRA 15:4)  
(Urea) (Corrosion and anticorrosives)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963510003-3"

ACCESSION NR: AR4015695

8/0081/63/000/023/0355/0356

SOURCE: RZh. Khimiya, Abs. 23K87

AUTHOR: Zak, E. G.; Balezin, S. A.; Baskov, S. D.

TITLE: The protection of steel parts with volatile inhibitors

CITED SOURCE: Uch. zap. Mosk. gos. ped. in-t im. V. I. Lenina, no. 181, 1962,  
94-107

TOPIC TAGS: corrosion, corrosion inhibitor, steel corrosion, rust, volatile corrosion inhibitor, parkerizing, cold parkerizing, dicyclohexylammonium nitrite, ethanolamine carbonate

ABSTRACT: Cold parkerizing (rustproofing), which decreases the rate of atmospheric corrosion of machine parts, does not insure long-term protection against atmospheric corrosion. Cold parkerizing as a method of preliminary treatment of a surface can suitably be combined with other protective methods, especially with vapor phase protection. As vapor phase inhibitors, substances with low vapor pressure and a large induction period can be used, since the slow development of corrosion on a parkerized surface makes it possible for an inhibitor of low volatility to form a protective atmosphere and insure further protection of the parts. The

Card 1/2

ACCESSION NR: AR4015695

layer of iron phosphates which are formed on the surface of the iron during parkerizing absorbs the inhibitors and insures their further protective action, i. e., this film plays a role analogous to that of iron oxides and hydroxides. For protection against atmospheric corrosion of hermetically sealed steel parts with a complicated inner structure (welded edges, thread, etc.) the following inhibitors and methods of application are recommended: 1) introduction of inhibitors in small bags into the inner part of the objects; in this connection, the following inhibitors are recommended for vapor phase protection: a) a mixture of dicyclohexylammonium nitrite with ammonium carbonate (1:4) in a quantity of  $10\text{g/m}^3$  of object volume, and b) mixture of ammonium carbonate with sodium nitrite (1:1.5) in a quantity of  $20\text{-}30\text{g/m}^3$  of object volume; 2) introduction into the inner part of the object of paper saturated with solutions of the inhibitors, which assure not only contact but also vapor-phase protection; one can recommend kraft-paper saturated with a 5% aqueous solution of dicyclohexylammonium nitrite or a 10% aqueous solution of a mixture of dicyclohexylammonium nitrite with monoethanolamine carbonate (1:1.5) in a quantity of  $3\text{-}4\text{m}^2$  of paper/ $\text{m}^3$  capacity; 3) washing the walls of the object with a 5% alcohol-water (7:3) solution of dicyclohexylammonium nitrite. Inhibitory emulsions cannot be recommended for the protection of hermetically sealed steel parts since their protective properties appear only during aeration of the surface of the object. 11 ref. Authors' summary

Card 2/2 DATE ACQ: 09Jan64 SUB CODE: JM ENCL: 00

188310

25078

S/081/61/000/010/011/029  
B117/B206

AUTHORS: Zak, E. G., Beskov, S. D.

TITLE: Investigation of phosphates of some organic bases as corrosion inhibitors

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1961, 288, abstract 10И225 (10I225). ("Uch.zap./ Mosk. gos. ped. in-ta im. V. I. Lenina", no. 146, 1960, 25 - 40)

TEXT: It was established that di- and triguanidine phosphates are effective corrosion inhibitors in neutral and weakly acid media and also inhibit atmospheric corrosion. The protective effect of phosphates of organic bases may be explained by the joint effect of phosphate ions and organic bases developing due to the hydrolysis of phosphate salts.  
[Abstracter's note: Complete translation.]

Card 1/1

25077  
S/081/61/000/010/010/029  
B117/B207

188310

AUTHORS: Zak, E. G., Beskov, S. D.

TITLE: The use of urea as inhibitor of atmospheric corrosion

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1961, 288, abstract  
104222 (10I222). ("Uch. zap. /Mosk. gos. ped. in-ta im.  
V. I. Lenina", no. 146, 1960, 154-158)

TEXT: Survey. The protective effect of the urea - NaNO<sub>2</sub> mixture is  
stated to be due to the joint action of nitrite ions and hydrolysis  
products of urea. 11 references are listed. [Abstracter's note:  
Complete translation.]

Card 1/1

SMIRNOV, K.N.; BAKULIN, S.A.; GOLOVINA, L.L.; ZAK, E.Ya.; KOGAN, S.D.

Effect of competitive athletics on gas exchange, pulse rate, arterial pressure and work capacity in humans. Fiziologicheskaya zhurnalistika. 45 no.3:289-294 '59. (MIRA 12:11)

1. From the Postgraduate Medical Institute, Leningrad, and the Central Institute of Physical Culture, Moscow.

(ATHLETICS,

blood pressure, pulse rate, resp. & work capacity  
in athletes (Bms))

(BLOOD PRESSURE,

in athletes (Bms ))

(RESPIRATION,

same)

(WORKING,

capacity in athletes (Bms))

(PULSE,

in athletes (Bms))

ZAK, F.

Improvement of the quality of Edam cheese in bricks and causes of some of the shortcomings. (Supplement) p. 1. (FRUMYSL POTRAVIN, Vol. 7, No. 4, 1956, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

ZAK, F.

ZAK, F. The national exposition of soft cheeses. p. 380. Vol. 7, no. 6,  
1956. PRIMYSL POTRAVIN. Praha, Czechoslovakia.

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

NEUGEBAUEROVA, L. ; KOTASEK, A.; ZAK,F.

Listeriosis of the mother and fetus. Cesk. gynek. 29 no.4:  
266-270 My'64

1. II. det. klin. fakulty det. lek. KU [Karlov university]  
v Praze (prednosta: prof. dr. J. Houstek, DrSc.); a I. gyn.-  
por. klin. fak. vseob. lek. KU [Karlov university] v Praze  
(prednosta: prof. dr. K. Klaus, DrSc.)

MALEK, P.; KOLC, J.; ZASTAVA, Vl.; ZAK, F.; PELESKA, B.

Fixation of tetracycline antibiotics in the focus of myocardial infarct.  
Cas. lek. cesk. 101 no.32/33:981-984 17 Ag '62.

1. Ustav klinicke a experimentalni chirurgie v Praze, reditel prof.  
dr. B. Spacek. — II. patologickanatomicky ustav KJ v Praze, prokanosta  
prof. dr. V. Jedlicka.

(TETRACYCLINE) (MYOCARDIAL INFARCT)

*ZAK, F.*  
KABELKA, M.; KAFKA, V.; KLEINT, Z.; ZAK, F.

Primary localized tumors of the pleura (mesotheliomas) in childhood; report of 3 cases. Česk. pediat. 11 no.12:881-887 Dec 56.

I. Kliniki Pediatricke Chirurgie KU v Praze, prednosta doc. Dr. V. Kafka. II. Chirurgicka Klinika, Prednosta Akademik J. Divis. III. Pathologicko-Anatomicky ustav Ku v Praze, prednosta prof. Dr. V. Jeklicka.

(PLEURA, neoplasms  
mesothelioma, in child. (Cs))  
(MESOTHELIOMA, case reports  
pleura, in child. (Cs))

KLEINT, Zd.; KAFKA, V.; MATEJOVSKY, M.; VLCEK, K.; ZAK, F.

Endobronchial sarcoma in three-year-old child. Cesk. pediat.  
11 no.12:895-900 Dec 56.

I. II. Chirurgicka Klinika, predn. akademik Jiri Divis.-Klinika  
Pediatricke Chirurgie, Predn. Doc. P. V. Kafka.-Klinika Detske  
Otorhinolaryngologie KU v Praze, predn. doc. Dr. J. Chvojka.  
-Detske Oddeleni o nemocnice v Klatovach, predn. prim. Dr. K. Vlcek  
-II. ustan Propathologickou Anatomi KU, predn. prof. Dr.  
V. Jedlicka.

(BROMCHI, neoplasma  
endobronchial sarcoma in child, surg. (Cz))

DIVIS, Jiri; ZAK, Frantisek

Fibrous leiomyoma of the lungs in a child. Rozhl. chir. 35 no. 9: 531-537 Au; 56.

I. z II. chirurgicke kliniky (predn. akad. J. Divis). z II. path. a pat. ustanovu (predn. prof. Dr V. Jedlicka)

(LEIOMYOMA, case reports

lungs, in child (Cz))

(LUNG NEOPLASMS, in inf. & child

leiomyoma (Cz))

KOCVARA, S.; HAHN, M.; CERVINKA, F.; ZAK, F.; HATALA, M.

Bacteriological examination in chronic prostatitis. Rozhl.  
chir. 42 no.5:321-326 My '63.

I. Ustav klinicke a experimentalni chirurgie v Praze, reditel  
prof. dr. B. Spacek, DrSc. II patologickoanatomicky ustav  
fakulty vseobecneho Lekarstvi KU v Praze, prednosta prof. dr.  
V. Jedlicka.

(PROSTATITIS) (STAPH INFECTIONS)  
(STREPTOCOCCAL INFECTIONS)  
(STREPTOCOCCUS FAECALIS)

MALEK, P.; ROKOS, J.; KOJECKY, Z.; KOLC, J.; PROCHAZKA, P.; ZAK, F.

The special role of tetracycline antibiotics in the prevention  
and therapy of acute pancreatitis. Rozhl. chir. 42 no.3:174-  
180 Mr '63.

1. Ustav klinické a experimentální chirurgie v Praze, ředitel  
prof. dr. B. Spacek DrSc. II vnitřní klinika lékařské fakulty  
PU v Olomouci Biologický ústav CSAV v Praze, ředitel akademik  
I. Malek. II patologickoanatomický ústav lek. fak. KU v Praze,  
prednosta prof. dr. V. Jedlicka.

(PANCREATITIS) (TETRACYCLINE) (LIPASE)  
(ENZYME INHIBITORS) (CHLORTETRACYCLINE)

MALEK, P.; ROKOS, J.; KOJECKY, Z.; KOLC, J.; PRCHAZKA, P.; ZAK, F.

The special role of tetracycline antibiotics in the prevention  
and therapy of acute pancreatitis. Rozhl. chir. 42 no.3:174-  
180 Mr '63.

1. Ustav klinické a experimentální chirurgie v Praze, ředitel  
prof. dr. B. Spacek DrSc. II vnitřní klinika lekarské fakulty  
PU v Olomouci Biologický ústav CSAV v Praze, ředitel akademik  
I. Malek. II patologickoanatomický ústav lek. fak. KU v Praze,  
prednosta prof. dr. V. Jedlicka.

(PANCREATITIS) (TETRACYCLINE) (LIPASE)  
(ENZYME INHIBITORS) (CHLORTETRACYCLINE)

151211

POLAK, E.; LEVINSKY, L.; JEDLOCKA, J.; JEDLICKA, V.; ZAK, F.

Operative closure of congenital esophagobronchial fistula in a woman  
with congenital pulmonary cysts & multiglandular insufficiency:  
nanosomia & geroderma produced by anovarism. Rozhl. chir. 36 no. 7:  
454-464 July 57.

I. Chirurgicka klinika hygienicke fakulty (prof. Dr. Emrich Polak),  
plicni klinika (prof. Dr Jaroslav Jedlicka), II, patologicko-anato-  
micky ustav (prof. Dr. Vaclav Jedlicka) Karlovy university v Praze.

(ESOPHAGUS, fistula

congen. esophagobronchial fistula with congen. pulm. cysts  
and nanosomia & geroderma caused by anovarism, surg. (Cz))

(BRONCHI, fistula

name)

(LUNGS, cysts

congen. with congen. esophagobronchial fistula & nanosomia  
& geroderma caused by anovarism, surg. (Cz))

(OVARIES, abnorm.

absence, causin; nanosomia & geroderma, with congen. eso-  
phagobronchial fistula & congen. pulm. cysts surg. (Cz))

EXCERPTA MEDICA Sec 9 Vol 13/2 Surgery Feb 59

1103. MORPHOLOGICAL CHANGES IN THE MYOCARDIUM AFTER DEFIBRILLATION - Morfologické změny v myokardu po defibrilaci - Žák F. and Peška B. II. Pathol.-Anat., Ústav KU; Ústav Klin. Exp. Chir., Praha - ROZHL. CHIR. 1957, 36/11 (727-730)

In experiments on dogs electrical defibrillation discharges were used with a potential of 2-3 kv. The discharges were applied transthoracically without an open chest and by direct application of the electrodes over the heart. The changes are described and were in general only slight. The most sensitive tissue to damage was the auricular appendage. Electrical defibrillation was applied only after 5-15 min. of fibrillation. The changes produced by defibrillation after a short period of fibrillation were not of such an extent as to significantly damage cardiac function. Myocardial damage increased with the duration of ventricular fibrillation and the frequency of defibrillatory discharges necessary to interrupt fibrillation.

ZAK, Fr.

MALEK, P.; KOLC, J.; ZAK, Fr.

Possibility of specific blocking of the lymphatic system; pathogenesis & experimental treatment of tetanus. Cas. lek. cesk. 96 no. 43:1369-1375 25 Oct 57.

1. Ustav klinické a experimentální chirurgie, ředitel doc. Dr. B. Spacek.  
2. patologickoanatomický ústav lékařské fakulty Karlovy univerzity v Praze, přednosta prof. Dr. V. Jedlicka. K sedmdesátým narozeninám akademika A. Jirasky.

(TETANUS, exper.

eff. of specific blocking of lymphatic system with  
antitoxin (Cs))

(LYMPHATIC SYSTEM, in var. dis.

exper. blocking with antitoxin in exper. tetanus (Cs))

ZAK, F.; HERDEGEN, L.; KLEINT, Z.

Granular endobronchial pseudotumor, so-called Abríksov myoblastic myoma,  
in a 14 year old boy. Česk. pediat. 14 no. 1:22-26 5 Jan 59.

I. II. patologicko-anatomicky ustav, prednosta prof. dr. V. Jedlicka  
IV. detska interni klinika, prednosta prof. dr. M. Blazek. Klinika detske  
chirurgie ped. fak., prednosta doc. dr. V. Zafka. II. chirurgicka klin-  
ika, prednosta akad. J. Divis. F. Z., II. pat.-amat. ustav, U Nemocnice  
4, Praha 2.

(BRONCHI, neoplasms

myoblastoma in adolescent boy, case report (Cz))

(MYOBLASTOMA, case reports

bronchial in adolescent boy (Cz))

MALEK, P.; KOLC, J.; ZAK, F.

Principles of two-stage lymphography. Cas. lek. cesk. 98 no.8:225-231  
20 Feb 59.

1. Ustav klinicke a experimentalni chirurgie, Praha. II. patologicko-anatomicky ustav lekarske fakulty EHU, Praha. P. M., Praha-Krc, Budejovicka 800.

(LYMPHATIC SYSTEM, radiography,  
two-stage lymphography in animals (Cs))

MALEK, P.; KOLC, J.; ZAK, F.; PAVLIK, P.

The distribution of tetracycline antibiotics in the tissue of the kidneys in physiological and some pathological conditions. Cas.lek. cesk 101 no.7:193-198 16 F '62.

1. Ustav klinické a experimentální chirurgie, Praha-Krč, ředitel prof. dr. B. Špaček. II patologickoanatomický ustav KU v Praze, prednosta prof. dr. V. Jedlicka.

(TETRACYCLINE metabolism)  
(KIDNEY metabolism)  
(KIDNEY DISEASES metabolism)

LHOTKA, J.; DANEV, I.; ZAK, F.; PALECEK, L.

On the treatment of breast cancer metastasizing to the axillary lymph glands. *Stor. Jek.* 66 no.11:332-335 N '64.

I. II. chirurgicka klinika (prednosta prof. dr. J. Lhotka, CSc.), II. patologickoanatomicky ustav (prednosta prof. dr. V. Jedlicka, DrSc.) a radiologicke kliniku (prednosta prof. dr. V. Svab, DrSc.) fakulty všeobecného lekarství Univerzity Karlovy v Praze.

DYBAL, Kazimierz; JANICKI, Jerzy; ZAK, Franciszek

New trends in the design of installations for thermal treatment of metallurgical products. Problemy proj hut maszyn 10 no.11:345-349 N '62.

1. Biprophut, Gliwice.

ZAK, Frantisek

Morphological changes in the lymph nodes following use of some  
drugs in examination of the lymphatic system. Acta Univ. Carol.  
[med.] (Praha) 9 no.3 191-223 '63

1. II. patologickoanatomicky ustav fakulty všeobecného lekarství  
University Karlovy v Praze; přednosta: MUDr. V. Jedlicka, DrSc.

ZAK, F.; MALEK, P.; ZASTAVA, V.; KOLC, J.

On the problem of prolonged retention of tetracycline antibiotics in the body in pathological states. Cas. lek. cesk. 102 no. 32/33:902-906 16 Ag '63.

1. II. patologickoanatomicky ustav fakulty vseobecneho lekarstvi  
KU v Praze, prednosta prof. dr. V. Jedlicka Ustav klinicke  
a experimentalni chirurgie v Praze, reditel prof. dr. B. Spacek.  
(TETRACYCLINE) (CALCIFICATION) (CALCULI)  
(MUSCLES) (MYOCARDIUM)

MALEK, P.; KOLC, J.; ZAK, F.

Distribution of tetracycline antibiotics in the body in shock states. Kozhl. chir. 42 no.3:187-191 Mr '63.

I. Ustav klinicka a experimentalni chirurgie v Praze, reditel prof. dr. B. Spacek, DrSc. II patologickoanatomicky ustanov fakulty všeobecného lekarství KU v Praze, prednosta prof. dr. V. Jedlicka.

(TETRACYCLINE) (SHOCK, TRAUMATIC), (MICE)  
(RABBITS) (DOGS) (SHOCK, HEMORRHAGIC)  
(CHLORTETRACYCLINE) (QXYTETRACYCLINE)

MALEK, P.; ZASTAVA, Vl.; KOLC, J.; ZAK, Fr.

On the possible diagnosis of malignant tumors by means of tetracycline antibiotics. Cas. lek. cesk. 102 no.1:16-20 4 Ja '63.

1. Ustav klinicke a experimentalni chirurgie v Praze, reditel prof.  
dr. B. Spacek, DrSc. — II patologickoanatomicky ustav fakulty vseobecneho  
lekarstvi KU v Praze, prednosta prof. dr. V. Jedlicka, DrSc.  
(NEOPLASMS) (TETRACYCLINE) (DIAGNOSIS)

CZECHOSLOVAKIA

ZAK, F., MALEK, P., ZASTAVA, V., and KOLC, J., Second Institute of Pathological Anatomy (II. patologickoanatomicky ustav), Faculty of General Medicine (Fakulta všeobecného lekarství), Charles University, Prague, (Prof. Dr V. JEDLICKA, director) and Institute of Clinical and Experimental Surgery (Ustav klinické a experimentální chirurgie), Prague, (Prof. Dr B. SPACEK, director) [individual affiliations cannot be determined].

"Prolonged Persistence of Tetracycline Antibiotics in the Organism under Pathological Conditions"

Prague, Casopis Lekaru Ceskych, Vol CII, No 32/33, 16 August 1963, pp 902-906.

Abstract [Authors' English summary, modified]: Discussed is the prolonged fixation of tetracycline antibiotics (TA) under pathological conditions. Under physiological conditions the TA are retained only in biologically active bone marrow. Under pathological conditions prolonged fluorescence is found also in tissues liable to calcification. A very intensive trapping and retention occurs in the striated skeletal and cardiac muscles. After discussing various specific cases the authors conclude that the fixation is caused by the formation of stable chelate TA complexes in tissues with bivalent cations, particularly cations of calcium. This phenomenon is discussed from the morphological viewpoint.

Forty-two references, including 25 Czech.

1/1

OLSANSKY, Cestmir; VYCHYTOVA, Hana; ZAK, Frantisek; CHLUP, Zdenek

Effect of milk acidity and its standardization on the  
Gruyere cheese quality; a cheese maker's prognosis. Pt.5.  
Prum potravin 14 no.2:85-89 F '63.

1. Vyzkumnny ustav mlekarensky, Praha, pracoviste Zeletava  
(for Olsansky).
2. Lacrum, n.p., Brno, zavod Zeletava  
(for Vychytova).
3. Vychoodeseske mlekarny, n.p., Pardubice  
(for Zak).
4. Vychoodeseske mlekarny, n.p., zavod Kruh u  
Jilemnice (for Chlup).

ELEFANT, E.; JELINEK, J.; HOLANOVA, L.; ZAK, F.

On the etiology of anuria in newborn infants. Cesk. pediat. 17 no.9:  
815-818 S '62.

1. III. detska klinika Detske fakultni nemocnice v Praze, prof. dr.  
O. Vychytil II. patologickanatomicky ustav University Karlovy v  
Praze, prednosta prof. dr. V. Jedlicka.  
(INFANT NEWBORN DISEASES) (ANURIA)

KOCVARA, Svatopluk; MALEK, Prokop; ZAK, Frantisok; PAVLIK, Frantisek

The protective effect of chlortetracycline on the hypoxic kidney.  
Rozhl. chir. 41 no.7:458-463 Jl '62.

1. Ustav klinicke a experimentalni chirurgie, Praha, reditel prof.  
dr. B. Spacek. II. patologicko-anatomicky ustav University Karlovy,  
Praha, ved. prof. dr. V. Jedlicka.

(KIDNEY blood supply) (ISCHEMIA exper)  
(CHLORTETRACYCLINE pharmacol) (RENAL ARTERY surg)

ZAK, FR.

CZECHOSLOVAKIA

I. HALEK, V. ZEJAKA, J. KOLC and Z. MELK Institute for Clinical and Experimental Surgery (Ustav klinické a experimentální chirurgie) Chief (reditel) Prof Dr J. SLÁČEK, DrSc; and Second Department of Pathological Anatomy of Medical Faculty, Charles University (II. patologickoanatomický učebný fakulty všeobecného lékařství KU/Karlov University,) head (Prednosta) Prof Dr V. JEDLICKA, DrSc; Prague

"Regarding the Possibility of Diagnosing Malignant Tumors with the Tetracycline Antibiotics."

Prague, Časopis Lekaru Českých, Vol 102, No 1, 4 Jan 1963; pp 16-20.

Abstract [English summary modified]: After reviewing topic, authors summarize their results (no date presented) which indicate that tetracyclines do not selectively accumulate in tumors to permit e.g. diagnosis of gastric tumors by fluorescence microscopy of irrigation smears; tetracyclines accumulate in necrotic tissues and in those undergoing regressive changes, primarily in histiocytes whether cause of regression-necrosis be tumorous or not. Only in murine ascites tumor did authors find fluorescence of actual tumor cell. Many human tissues

- 2/1

6

LHOTKA, J.; BOREK, Z.; CHMEL, K.; ZAK, F.

Contribution to the problem of reticulum-cell sarcoma of the mediastinum. Rozhl. chir. 41 no.5:336-341 My '62.

1. II. chirurgicka klinika FVL University Karlovy v Praze, predn.  
prof. dr. J.Lhotka II. patol.-anatom. ustav University Karlovy v Praze,  
prednosta prof. dr. V. Jedlicka.

(SARCOMA RETICULUM CELL surg)  
(MEDIASTINUM neopl)

KOCVARA, Svatopluk; ZAK, Frantisek

Replacement of the ureter with prostheses of plastic materials.  
Rozhl. chir. 41 no.7:441-449 Jl '62.

1. Ustav klinicke a experimentalni chirurgie, Praha, red. prof. dr.  
B. Spacek. — II. patolo gicko-anatomicky ustav fakulty všeobecného  
lekarsvti University Karlovy, Praha, ved. prof. dr. V. Jedlicka,  
(URETER surgery)

ZAK, L.A., CHIBISOV, V.V., NAGORNYY, N.M., ORLOVA, I.A., red., KORKINA, A.I., tekhn. red.

(Test programs for the BESM-2 computer) Testovye programmy dlia mashiny BESM-2.  
Moscow, Computing Center AN SSSR, 1961 24p.

SPURNY, Zdenek; ZAMECHNIK, Jiri; HRUSKA, Jiri

Chemical dosimeter in ionizing radiotherapy. I. Possibility of use. Cesk. rentg. 13 no. 3:188-191 June 59.

1. Ustav jaderneho vyzkumu CSAV, doz. odd., vedouci prof. dr. F. Behounek  
Onkologicky ustav v Praze, reditel MUDr. F. Vadura. Z.S., Praha 8, Onkolog.  
ustav Praha 8, Na Truhlarce 100.

(RADIOTHERAPY, appar. & instruments  
dosimeter, chem. (Cz))

ZAK, G.

## PROCESSES AND PROPERTIES INDEX

Pharmacodynamic examinations on heart and digestive tract of *Leydigora kindtii*. I. Effects of chloroform, glucose and some other agents. A. Freihling and G. Zak. *Magyar Biol. Kutatás Irányelv Működés* 7, 207-13 (1934).—Scrophularia-g. (1:600) stopped heart activity. Crystal violet (1:10,000, 1:20,000) started peristaltic movement but stopped the heart even at 1:10<sup>3</sup>. Camphor (1:10,000) again started the heart but halted peristalsis. Physostigmine nitocylate (1:800) decreased the heart rate. Acetylcholine had almost no effect on the heart. Eserine and physostigmine contracted (1:500) the intestinal system, but camphor overcame this contraction, as well as that caused by acetylcholine (1:10,000, 1:100,000). Adrenalin stopped peristalsis. Chloroform (1:1000) had no effect, and papaverine (1:10<sup>3</sup>) overcame the effects of pilocarpine. II. Effects of alkali and alkaline earth chlorides and magnesium and oxalate ions. *Ibid.* 275-80.—KCl and NH<sub>4</sub>Cl decreased the tone of heart and intestinal movements. RbCl and CsCl caused arrhythmia and stopped peristalsis. NaCl, LiCl and CaCl<sub>2</sub> had slighter effects. FeCl<sub>3</sub> caused stronger arrhythmia. BaCl<sub>2</sub> stopped the heart in 30-40 min. and first activated and then stopped peristalsis. MgCl<sub>2</sub> had the same effect in 110 min. Oxalate had for 200 min. no disturbing effects, then stopped the heart in diastole and halted peristalsis. S. S. de Finville

111

## ABR-1A METALLURGICAL LITERATURE CLASSIFICATION

ABCR SYSTEMATIC — SUBJECT INDEX

SUBJECT INDEX CODES

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MALYAROV,V.; ZAK,O.; AGAFONOV,Ye.

Powder metallurgy. Prom.koop. no.6:19-22 Je'55. (MLR 8:11)

1. Glavnyy inzhener arteli "8-ya mekhanicheskaya" Nauchno-issledovatel'skogo instituta mashinostroyeniya (for Malyarov) 2. Nachal'nik ekperimental'nego tsentra (for Zak) 3. Nachal'nik tsentra poroshkovoy metallurgii (for Agafonov)

(Powder metallurgy)

Country : USSR  
CATEGORY : Plant Diseases - General  
ABS. JOUR. : RZBiol., No. 19 1958, No. 87309  
AUTHOR : Zuk, G. A.  
INST. : Kuybyshev Institute of Land-Use Colonization  
TITLE : Some Aspects of Plant Parasitology  
ORIG. PUB. : Izv. Kuybyshevsk. inzh.-melior. in-ta, 1955,  
              11, 105-119  
ABSTRACT : No abstract.

ZAK, G. A.

GILYAPOVSKIV, V.F., and ZAK, G. A. "On the Question of the Physiological Basis of Resistance of Spring Wheat to Rust (*Tilletia tritici* Wint.)," Rauchno-Agronomicheskiy Zhurnal, vol. 7, no. 5-6, 1930 pp. 379-386. 20 J32

So: S'ra S1-90 53, 15 Dec 1953

BC

Hardening of plants in dry soil under irrigation conditions. I. Effect of hardening on growth and reproductive processes. N. S. PAVLOV and G. A. KAR. II. Effect on photosynthesis and yield. N. S. PAVLOV (Oecologia Acad. Sci. U.R.S.S. 1958, 18, 68-88, 16-33).—I. Drought-hardening of summer wheat consistently lowers the growth rate to extents which vary with the period of growth at which hardening takes place.

II. Hardened plants showed diminished photosynthetic activity and yield, the effect being greatest when hardening occurs in the early stages of growth.  
A. G. P.

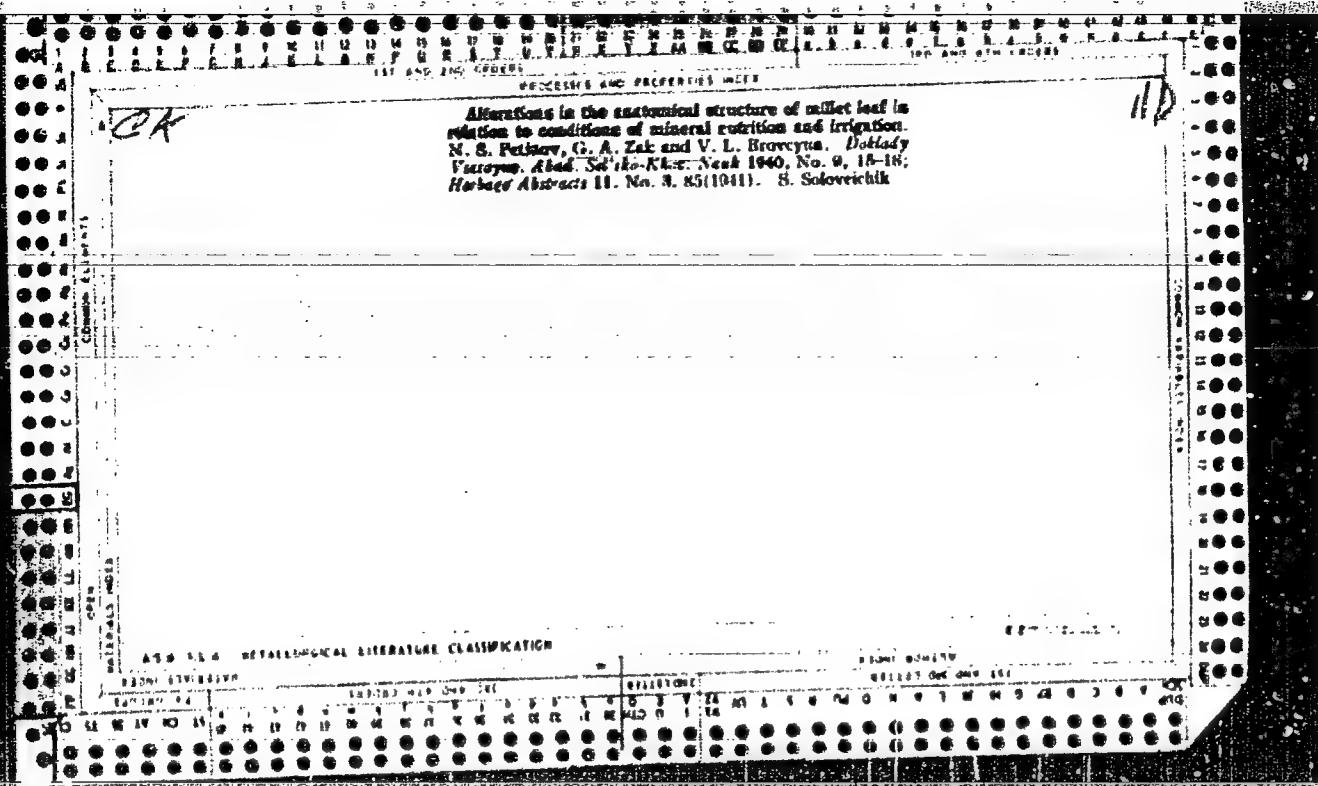
ZAK, G. A.

ZAK, G. A. "On the Fundamentals of Phytopathological Characteristics of Varieties and on the Significance of Artificial Inoculation in Selection," Doklady Vsesoiuznoi Akademii Sel'skohoziaistvennykh Nauk imeni V. I. Lenina, no. 6, 1960, pp. 12-14. 20 Ak1

So: Sira - Si - 90 - 53, 15 December 1953

The effect of mineral fertilizers on the formation of  
indumentary ear and the yield of spring wheat. N. I.  
Petanov and G. A. Zak. Polzdy. Leningr. Akad. Sel'-  
sko-Khoz. Nauk. T. 40, No. 8, 17-21; *Herbage Abstracts*  
II, No. 3, 86 (1941). S. Solovenchik

ASTORIA METALLURGICAL LITERATURE CLASSIFICATION



6A.

Bacteria breaking down aluminosilicates. V. G. Alekandrov  
and G. A. Zak. *Micrometeorology*, 1950, 10, 97-104). By culture on  
silicate-agar media with added total aluminosilicates two bacterial  
species capable of breaking down aluminosilicates were isolated,  
*Bacillus mucilaginosus*, subsp. *silicicola* and *B. megaterium*, De Bary.  
During breakdown of aluminosilicates K is liberated, and in soil  
becomes available for vegetable use. Hence addition of these  
bacterial cultures to soil at time of sowing has increased the yield  
of barley and maize. D. H. SMITH.

Kryvyi Rih Agric. Inst., Dept. Agrochemistry  
and Dept. Plant Physiol.

1. ZAK, G. A.
  2. USSR (600)
  4. Agriculture
  7. Tree and field shelter belt diseases and insect pests. Kuib'yshhev,  
Oblastnoe izdatel'stvo, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1

ZAK, Grigoriy Gavrilovich; RUBINSHTEYN, Lev Iosifovich; GORANSKIY,  
G.K., kand. tekhn. nauk, red.; BARABANOVA, Ye., red. izd.-  
va; VOLOKHANOVICH, I., tekhn. red.

[Machinery designer's handbook] Spravochnik konstruktora  
(mashinostroitelia) Minsk, Izd-vo Akad. nauk BSSR, 1963.  
567 p. (MIRA 16:5)

(Machinery— design and construction)

ZAK, Genrikh Lazarevich, kand.tekhn.nauk; KHASKIN, S.A., red.; OTOCHEVA,  
M.A., red.izd-va; SHLIKHT, A.A., tekhn.red.

[Self-purification of water reservoirs; principles underlying  
the regulation of hydrological and sanitary-engineering calcula-  
tions.] Samoochishchanie vodoemov; osnovy ratsionalizatsii gidro-  
logicheskikh i sanitarno-tehnicheskikh raschetov. Moskva, Izd-vo  
M-va komun.khos, RSFSR, 1960. 159.  
(Water--Purification) (MIRA 13:5)

ZAK, G.I., inzh.

Suspension bridge made of prestressed reinforced concrete.  
Transp. stroi. 9 no. 4:50-51 Ap '59. (MIRA 12:5)  
(Belgium—Bridges, Concrete)

B'YAZHI, P. [Biaggi, P.]; LSYCHIK, V.M. [translator]; ZAK, G.I. [translator];  
DMITRIYEVA, L.N., red.izd-va; BERKSLAVSKAYA, L.Sh., tekhn.red.;  
KOROVENKOVA, Z.A., tekhn.red.

[Conveyers with rubber belts] Konveiery s rezinovoi lentoj. Moskva,  
Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1959. 293 p.  
Translated from the French. (MIRA 13:12)  
(Conveying machinery)

ZAK, G.I., inshe.

Underpass constructed on the nonintersected loop in Berlin.  
(from "Die Bautechnik", no.5, 1958) Transp.stroi. 9 no.3:55-  
56 Mr '59. (MRA 12:4)

(Berlin—Underpasses)

BODRIKOV, I.M., ed.; GOLOVANOV, A.L., redaktor; BEGICHEV, V.G., inzhener;  
BERESLAVSKIY, Ya.M., inzhener; ZAK, G.I., inzhener; SOLOGUB, A.D., inzhener;  
TANTSHAN, A.I., inzhener; TIKHONOVA, E.V., inzhener.

[Progressive technology in the building materials industry of the Ministry  
of Railroad Transportation] Perekovaya tekhnologiya v promyshlennosti  
stroiteley nykh materialov MPS. Moskva, Gos. transp. zhel-dor. izd-vo, 1952.  
(MIRA 6:5)  
62 p.

(Building materials)

ZAE, G. I.

Vedostoki. Osnovy ratsional'nogo proektirovaniia i rascheta (Bunov's. Principles of efficient planning and computation). 2-e izd. Moscow, Izd-vo N-va komun. knizh-vk RSFSR, 1952. 208 p.

SO: Monthly List of Russian Accessions, Vol. 6, No. 3, June 1953

ZAY, G.L., kandidat tekhnicheskikh nauk; KOGAN, A.S., kandidat tekhnicheskikh nauk, dotsent, redaktor; SOKOL'SKIY, I.F., redaktor; GUROV, O.A., tekhnicheskiy redaktor

[Calculation tables for sewer main of various shapes] Tablitsy dlia rascheta kanalizatsionnykh kollektorov razlichnykh profils. Moskva, Izd-vo Ministerstva komunal'nogo khoziaistva RSFSR, 1953. 213 p. [Microfilm] (MIRA 7:10) (Sewerage)

ZAK, G.L.

Determination of the runoff time for rain water. Vod. i san. tekhn.  
no.11:32-33 N '61. (MIRA 15:6)  
(Runoff)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963510003-3

ZAK, G. L.

~~Homograms for calculating water flow. Vod. i san.tehn.no.4:20-23  
J1 '55.~~

~~(Hydraulics--Tables, calculations, etc.)~~

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963510003-3"

ZAK, O.M.; AGAFONOV, Ya.A.; MALYAROV, V.Z.; TIKOMHINA, V., redaktor;  
KATAPOV, M., tekhnicheskiy redaktor

[Metalceramics in the manufacture of metal parts for consumer products] Metallokeramika v proizvodstve metallicheskikh izdelii shirokogo potrebleniia. Moskva, Vses. kooperativnoe izd-vo, 1956.

(MIRA 10:2)

53 p.  
(Powder metallurgy)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963510003-3

ZAK, G.Ye. (Editor)

"Physics of Clouds," Trudy Tsentral'noy Aerofizicheskoy Osservatii (Works of the Central Aerofizical Observatory), No 7, 1952, Leningrad (Editor: Ye. G. Zak).

APPROVED FOR RELEASE: 03/15/2001

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"APPROVED FOR RELEASE: 03/15/2001

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APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963510003-3"

POL/43-59-11/12-8/33

18(5)

AUTHOR:

Zak, Hanna, Master of Engineering

TITLE:

The Application of Vacuum in Metallurgy

PERIODICAL: Wiadomości hutnicze, 1959, Nr 11-12, pp 355-360  
(Poland)

ABSTRACT:

The article discusses the advantages of vacuum degassing of metals in the liquid state and, in general terms, the structure and operation of induction and arc vacuum furnaces. The vacuum method is developing and spreading rapidly in all industrialized countries in view of the fact that it gives higher quality products. The amount of gas contained in cold metal is very small considering its relationship by weight to the metal. But if it were separated from the compounds (mainly oxygen and nitrogen) which it forms, it would be found to be of about the same volume (at normal temperature and pressure) as the metal in which it is contained. Such large quantities of gas obviously have a deteriorating influence on metal qualities. Hence ✓

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the imperative need to reduce gas content, especially in metals destined for special purposes. Known since the 19th century, the vacuum process was first used on an industrial scale during the WW I by the German firm Heraeus of Hanau and has developed rapidly since 1950 with the introduction of high output vacuum pumps. The application of vacuum techniques during melting and casting gives the following advantages: the gas content is much lower; the content of non-metallic bodies is reduced by eliminating direct contact with air and slag; ingots are healthy and compact since no gas is given off during cooling, thus eliminating bubbles and blisters; There is less waste of metal and more accuracy in obtaining the exact chemical composition required; finally, dangerous impurities are removed by evaporation (e.g. copper refining to remove lead, zinc, tin, etc.). There follows a description of induction and arc furnaces at present in common

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use. (Figs 1-4). Arc furnaces have the following advantages over induction furnaces: no refractory materials are needed; internal segregation and pores are at a minimum since the ingot cools gradually; larger ingots may be obtained; and finally production costs are lower. But modern industry often demands degasifying of much larger quantities of metal than can be held in these vacuum furnaces. This problem is solved by the use of vacuum chambers which permit the degassing of steel processed in normal furnaces. There follows a general description of the workings of vacuum chambers (see Figs 5-10). The author concludes by stating that one of the chief advantages of the vacuum process is the reduction of hydrogen content, often up to 60%. The metal thus obtained has much less tendency to flaking, has better mechanical properties and is much better suited to plastic treatment. Though the costs involved are significant, the advantages are

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so great, that for general purposes it is profitable to process in vacuum chambers forging ingots of over 100 tons. Induction and arc vacuum furnaces on the other hand, are best suited for the production of refractory alloys and steel for the airplane industry and for roller bearings. There are 10 diagrams and 9 references, 2 of which are Polish, 1 Soviet, 1 German and 5 English.

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POL/39-25-11-10/26

18(5)  
AUTHOR:

Żak, H., and Pacuła, B., Mechanical Engineers

TITLE:

Theoretical and Practical Principles of Production of  
Low-Carbon Ferrochrome (Teoretyczne i praktyczne pods-  
tawy produkcji niskowęglowego zelazochromu)

PERIODICAL: Hutnik, 1958, Vol 25, Nr 11-12, pp 481-486 (Poland)

ABSTRACT:

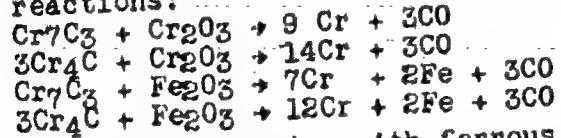
Ferrochromes are used for adding chrome to steels in order to improve their resistance to corrosion, acids and high temperatures. Steels, the carbon content of which does not exceed 1% of the chrome content have the highest resistance to corrosion. The methods used at present for the production of low-carbon ferrochrome in Poland and abroad require very high temperatures, are complicated and costly. The Institute of Iron Metallurgy, Gliwice, has been studying, since 1956, methods for the production of low-carbon ferrochrome from a mixture of high-carbon ferrochrome and metallic oxides heated in vacuum below the melting point. The theoretical considerations and laboratory research were based

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Ferrochrome

on the use of a ferrochrome with about 60% Cr and 3 to 8% C. At temperatures above 1000°C, the alloy contains double chrome and ferrous oxides, the heats of formation and the entropies of which are not known. The thermodynamic calculations were made for the following reactions:



The decarbonization with ferrous oxides takes place at lower temperatures, but reduces the chrome content in the final product. The decarbonization with chrome oxides enriches the final product with chrome. The laboratory research has shown that heating a mixture of high-carbon ferrochrome and chrome oxide in a vacuum chamber can produce at a pressure of about 0.1 mm Hg and a temperature of 1300°C a ferrochrome with 0.02% carbon content. The vacuum process is uncomplicated ✓

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Theoretical and Practical Principles of Production of Low-Carbon Ferrochrome

and relatively cheap and gives a big yield. Its product would help to improve the resistance of chrome steel to acids without adding titanium. An industrial application of this process would result in economy of raw materials and better product. There are 5 tables, 2 diagrams, 2 graphs and 11 references, 4 of which are Polish, 3 Soviet, 1 German and 3 English.

ASSOCIATION: IMŻ - Gliwice (Institute of Iron Metallurgy - Gliwice)

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ZAK, Hanna, dr inz.

Development prospects for vacuum degassing methods of  
steel in Polish and foreign steelworks. Wiad huf 15  
[i.e. 20] no. 2: 42-45 F '64.

ZAK, Hanna, mgr inz.

Application of the vacuum in metallurgy. Wiad huta 15  
no.11/12:355-360 N-D '59.

Distr: 4E2c

✓ Nitriding of ferrochrome. U. Zak and Z. Kulicki. *Prace Inst. Hlinic.* 12, No. 1, 9-10(1960). — The expts. on nitriding of ferrochrome briquets prep'd. by sintering in a vacuum furnace were described. The initial chem. compn. of ferrochrome granules was Cr 50.80, Mn 0.15, Al 0.037, Si 0.41, and C 3.00%, or Cr 59.20, Si 0.21, Mn 0.16, Al 0.038, and C 2.98%. Depending upon the size of the granules; however, as a result of Cr<sub>2</sub>O<sub>3</sub> addn., the content of C was reduced to 0.02% in either fraction as detd. in the briquets after the sintering process. The effect of temp., 800-1300°, and time, 0.5-3 hrs., on the nitriding process of ferrochrome was examt. In another series of expts. the nitriding of metallic Cr contg. Cr 96-9, Al 0.1-0.5, and C 0.03-0.05% has been examt. The optimum temp. and granule size for nitriding of ferrochrome was 1100° and 0.5 mm., resp. Under these conditions and N pressure in the furnace of 0.65 abs. atm. the N concn. in ferrochrome after 3 hrs. reached 0.5%. Although metallic Cr combined with N more readily under the conditions studied, its use as a charged material for alloying of steel with N should be limited to cases when the low-C ferrochrome was unavailable. W. Tomaszewski

ZAK, H.

✓ Vacuum decarburization of ferrochrome. H. Zak and B. Paczula, *Prace Inst. Hutniczych* 11, 75 S(1959). — A method of production of Fe-Cr alloy contg. C < 0.07% by vacuum annealing of a solid mixt. consisting of high-C ferrochrome and metal oxides at high temp., was developed. The expts. involved over 100 annealing tests, the variable parameters being: mixt. compn., time and temp. of annealing, grain size of Fe-Cr, and the shape of specimen. The optimum conditions were specified. Grain size of Fe-Cr should be < 0.5 mm. The charge of metal oxides should correspond to the O amt required for theoretical conversion of all C contained in ferrochrome into CO. The mixt. should be annealed at 1300° and under the pressure of 0.5 mm. Hg., the time being kept established for the given conditions of the process. The exptl. losses of Cr were low and the obtainable product contg. C 0.03% was ready for use in the steel-melting process without any addtl. treatment.

W. Tomaszewski

ZAK, Hanna, dr inz.; KULINSKI, Zdzislaw, mgr inz.

The Ugine-Perrin method as applied to the production of  
ferroalloys. Wiad hut 19 no. 5:111-114 My '63.

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963510003-3

ZAK, Hanna

More speed in the development of the application of vacuum  
metallurgy. Przegl techn no.33:4,5 17 Ag '60.

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963510003-3"

S/137/62/000/003/015/191  
A006/A101

AUTHORS: Zak, H., Kulinski, Z.

TITLE: Decarbonization in a vacuum and nitriding of ferromanganese

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 24, abstract 3V166  
("Prace Inst. hutn.", 1961, v. 13, no. 1, 27-36, Polish; Russian  
and English summaries)

TEXT: A method was developed to obtain Fe-Mn with low C content (about 0.25%) and N content > 3.3% which could act as an alloying admixture in melting low-carbon Cr-Mn steel, containing N<sub>2</sub>. The authors investigated the effects of pressure, temperature, time, and grain size of the initial material on the reaction process of decarbonization and nitriding. Roasting for 3 hours at 1,100°C and pressure < 1 mm Hg of crushed Fe-Mn (< 1 mm) containing 1% C, with addition of about 9% cinder, yields a product containing about 0.25% C. Nitriding of this product yields best results when heated to 900°C at 1 atm pressure; the N content in Fe-Mn is about 5%. ✓

D. Kashayeva

[Abstracter's note: Complete translation]

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ZAK, H.

ZAK, H. Aluminothermic method of casting steel. Bliuletyn. p. 42.  
Vol. 21, no. 11, Nov. 1956.  
HUTNIK. Katowice Poland

SOURCE: East European Accessions List (EEAL) LC Vol. 5, No. 6, June 1956

POL/39-25-11-10/26

18(s)  
AUTHOR:

TITLE:

PERIODICAL:

ABSTRACT:

Card 1/3

Zak, H., and Paczuła, B., Mechanical EngineersTheoretical and Practical Principles of Production of  
Low-Carbon Ferrochrome (Teoretyczne i praktyczne pod-  
tawy produkcji niskowęglowego żelazochromu)

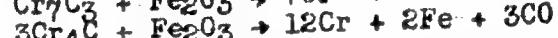
Hutnik, 1958, Vol 25, Nr 11-12, pp 481-486 (Poland)

Ferrochromes are used for adding chrome to steels in order to improve their resistance to corrosion, acids and high temperatures. Steels, the carbon content of which does not exceed 1% of the chrome content have the highest resistance to corrosion. The methods used at present for the production of low-carbon ferrochrome in Poland and abroad require very high temperatures, are complicated and costly. The Institute of Iron Metallurgy, Gliwice, has been studying, since 1956, methods for the production of low-carbon ferrochrome in a mixture of high-carbon ferrochrome and metallic oxides heated in vacuum below the melting point. The theoretical considerations and laboratory research were based

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Theoretical and Practical Principles of Production of Low-Carbon  
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Theoretical and Practical Principles of Production of Low-Carbon  
Ferrochrome

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ASSOCIATION: IMŻ - Gliwice (Institute of Iron Metallurgy - Gliwice)

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"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963510003-3

ZAK, Hanna, dr inż.; KULINSKI, Zdzisław, mgr inż.

Teeming of iron alloys. Wiad. hut 18 no. 10:295-297 0 '62.

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963510003-3"

ZAK, Hanna, dr inz.

The technological conditions and the reaction process of  
nitrogen hardening of chromium. Przegl mech 22 no.3:88  
10 F '63.

1. Katedra Metalografii i Obróbki Cieplnej, Akademia Górnictwo-  
Hutnicza, Kraków.

ZAK, Hanna, dr. inz.

Vacuum furnaces for melting steel and alloys. Biul inf inst  
metal zel no.2/3:11-15 '63.

1. Institute of Iron Metallurgy, Gliwice.

RADZWICKI, K.; ZAK, H.

Production of vacuum decarbonized and nitrogen hardened ferro-alloys. Biul inf inst metal zel no.1:5-8 '63.

1. Institute of Iron Metallurgy, Gliwice.